

wherein a surface zone of the first conductivity type forms a first anode and cathode area of the SCR element,

the surface area has a surface zone of the second conductivity type, further denoted as first zone, situated remote from the well and forming a second anode and cathode area of the SCR element, and

the at least two gated diodes contain a gate insulated from the surface of the semiconductor body and a highly-doped second conductivity type surface zone aligned to this gate further denoted as second zone, which aligned surface zone partly overlaps the well of the second conductivity type, characterized in that the said second zone stretches out only along a part of the periphery of the well, whereas the first zone is provided along at least another part of this periphery of the well which is free from the said second zone.

2. (Pending) A semiconductor device as claimed in claim 1, characterized in that the gate of the at least two gated diodes substantially stretches out only along that part of the periphery of the well along which also the said second zone of the second conductivity type stretches out.

3. (Pending) A semiconductor device as claimed in claim 2, characterized in that the at least two gated diodes are arranged in the form of a MOS transistor which has a further surface zone of the second conductivity type, deposited in the surface area of the first conductivity type, the said second zone forming one of the source/drain zones of the transistor and the said further surface zone forming the other one of the source/drain zones of the transistor, the said first zone of the

second conductivity type being situated at a shorter lateral distance from the surface zone of the first conductivity type provided in the well than the said further surface zone.

4. (Pending) A semiconductor device as claimed in claim 3, characterized in that the further zone of the second conductivity type and the said first zone of the second conductivity type form a zone of the second conductivity type.

5. (Pending) A semiconductor device as claimed in claim 1 characterized in that the first and the second conductivity type are the p-conductivity type and n-conductivity type respectively, the said first zone forming the cathode of the SCR element and the first conductivity type zone arranged in the well forming the anode of the SCR element.

6. (Pending) The semiconductor device of Claim 1, wherein the well of the second conductivity type is arranged in the form of a longitudinal zone, the surface zone of the first conductivity type is formed by a longitudinal zone in the well of second conductivity type which well has in its center an opening at the position of which a highly doped zone of the second conductivity type is provided which forms a contact area for the well of second conductivity type.

F1
Sub
F3

7. (Amended) The semiconductor device of Claim 6, wherein the at least two gated diodes are provided on one end of the longitudinal zone and comprises the insulated gate and the highly doped second conductivity type surface zone which partly overlaps the well of the second conductivity type.